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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--|------------------|
| 10/501,435 | 07/13/2004 | Tatsuya Kato | 890050.485USPC | 7431 |
| <div>7590 12/05/2008 David V Carlson Seed Intellectual Property Law Group Suite 6300 701 Fifth Avenue Seattle, WA 98104-7092</div> | | | <div>EXAMINER HALEY, JOSEPH R</div> <div>ART UNIT 2627</div> <div>MAIL DATE 12/05/2008</div> <div>PAPER NUMBER PAPER</div> | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/501,435 | Applicant(s) KATO ET AL. | |
| | Examiner JOSEPH HALEY | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 9-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. (US 6236635) in view of Miyamoto et al. (US 6231945 now referred to as '945 patent).

In regard to claims 1, 12, 16, 20 and 22 Miyamoto et al. teaches a method of recording information to an optical recording medium to which information is recorded by projecting a pulse-modulated laser beam onto the optical recording medium and forming on the optical recording medium a plurality of recording marks selected from a group of several types of recording marks each with different lengths (fig. 6), wherein the method of recording information to an optical recording medium comprises: setting recording powers of a top pulse and/or a last pulse of a laser beam used for forming at least one recording mark from said group to a second recording power lower than a first recording power which is a recording power of an intermediate pulse(s) between the top pulse and the last pulse (fig. 6); and setting a bottom power of each low power pulse, including the cooling pulse, to be substantially the same as each other, thereby recording information in the optical recording medium (fig. 6 see P4) but does not teach setting a pulse width of a cooling pulse of the laser beam used for forming at least one

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recording mark contained within said group to be wider than a pulse width of each of the top pulse, intermediate pulse(s) and last pulse (Miyamoto et al. does teach adjust thing cooling pulse width according to jitter see column 9 lines 55-57).

The '945 patent teaches setting a pulse width of a cooling pulse of the laser beam used for forming at least one recording mark contained within said group to be wider than a pulse width of each of the top pulse, intermediate pulse(s) and last pulse (fig. 3).

The two are analogous art because they both deal with the same field of invention of recording pulses for an optical disc.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Miyamoto et al. with the cooling pulse widths of the '945 patent. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Miyamoto et al. with the cooling pulse widths of the '945 patent because it would reduce jitter.

In regard to claims 2, 13 and 17 the '945 patent teaches wherein the first and last recording powers are at the same level (fig. 3).

In regard to claims 3, 4, 14, 15, 18 and 19, Miyamoto et al. teaches wherein the first recording power (P_{w1}) and the second recording power (P_{w2}) are set so that P_{w2}/P_{w1} is smaller than 0.9 (column 9 lines 19-28).

In regard to claim 9, Miyamoto et al. teaches wherein the pulse width of the cooling pulse is set to be equal to or wider than $1.0 T$, wherein T is one clock cycle (fig. 9).

In regard to claims 10 and 11, Miyamoto et al. teaches a length of a shortest signal between neighboring recording marks is equal to or shorter than 30 ns (column 6 lines 17-20 and fig. 9. Miyamoto et al. teaches a minimum T of 5 ns and a minimum space portion of 3T).

In regard to claim 21, the '945 patent teaches setting the pulse width of the cooling pulse to be greater than or equal to three times wider than any of said at least one intermediate pulse of a pulse train of said laser beam for forming the recording mark (fig. 3. The intermediate pulses have a width of one clock pulse and the cooling pulse has a width of 4 clock pulses).

In regard to claim 23, Miyamoto et al. teaches wherein the power level of all bottom power pulses are to substantially the same power level as each other (fig. 6).

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments, see page 9 paragraph 7 and page 10 paragraph 1, filed 7/29/08, with respect to claims 1-4 and 9-21 have been fully considered and are persuasive. The rejection of these claims have been withdrawn.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH HALEY whose telephone number is (571)272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/

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Supervisory Patent Examiner, Art
Unit 2627

/Joseph Haley/
Examiner, Art Unit 2627